REMARKS

Applicants have reviewed the Final Office Action dated July 23, 2008, and the references cited therein. The Office Action rejects claim 19 under Section 112, paragraph 1, as failing to comply with the written description requirement. The Office Action also rejects claims 1-19 as obvious over Aubury US Pat. App. Pub. 2003/0140337 (Aubury) in view of Bickmore et al. U.S. Pat. No. 6,857,102 (Bickmore) and Li et al. U.S. Pat. No. 7,143,392 (Li).

Applicants have amended the claims. Applicants have canceled claim 19, with traverse and without prejudice to re-submit the claim at a later time. Applicants have also amended claims 5 and 6 in accordance with the written description of FIG. 2 at page 8 of Applicants' original application. Presently pending claims 1-18 are in proper form for allowance.

Applicants traverse the rejections of the presently pending claims over Aubury in view of Bickmore and Li. For the reasons set forth herein below, Applicants request favorable reconsideration of the Office Action's grounds for rejecting claims 1-18 in view of Applicants' further amendments.

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Detailed Remarks Responding to the Prior Art-Based Rejections

Applicants traverse the rejection of each of the presently pending claims (1-18) as obvious over Aubury in view of Bickmore and Li because the cited references do not, in combination, teach the claimed methods. In fact, Bickmore clearly is not in the field of endeavor to which Applicants' claimed subject-matter relates. Furthermore, Applicants specifically traverse the Final Office Action's assertion that one skilled in the art would have looked to Bickmore to modify Aubury's system in order to render Applicants' claimed invention.

The presently claimed invention is directed to a method for partitioning a *source code specification* for a target system (e.g., a multiprocessor system including two or more types of processors). Applicants' description of exemplary embodiments of their invention (see, page

2, paragraph 2) discloses that for a target system including a general purpose processor and a co-processor, at some point a decision is made with regard to which functions are implemented on the general purpose processor and which functions are performed on the co-processor. Thus, the specification is split into multiple partitions. Thereafter, the partitioned abstract syntax trees are converted back to source code to facilitate manual review and editing of the underlying instructions/data structures of the source code.

The second partitioning step, wherein the first and second sets of abstract syntax trees are converted back to source code, facilitates manually editing the partitioned source code specification, and thus provides the opportunity for a user to tune the program instructions of the previously generated/partitioned first and second abstract syntax tree sets. Additionally, the back-converted source code can be further processed by software compilation and hardware synthesis tools differing from the tool that performed the recited "partitioning" step. The above features of the claimed "second converting" step are also applicable to co-design of a system including a first processor and one or more co-processors (see, claims 7-18). In the case of co-design of a system, the use of dedicated tools for designing/tuning the source code partitions allocated to the co-processors facilitates an optimal design for the target system.

Aubury, as the Final Office Action concedes, discloses (see, FIG. 4 and par. [0122] of Aubury) converting a specification into "the abstract syntax tree" -- NOT Applicants' claimed "plurality" of abstract syntax trees -- that is supplied to a partitioner. Aubury discloses a system for designing and producing electronic circuits based upon a specified functionality. The designs produced by Aubury's system specify both hardware and software for carrying out specified functionality. Aubury's system automatically partitions a behavioral description of an electronic system into an optimal allocation of hardware and software. *See*, Aubury, par. 0010. Furthermore, Aubury discloses compiling functional descriptions into an "RTL description" and "machine code" (see, Aubury, par. 143) -- neither of which is source code. Similarly, paragraph 153 of Aubury describes RTL description as the generated output. A hardware description language such as Handel-C or VHKL is used as a tool, but is not the *output* of the conversion procedure disclosed in paragraph 153 of Aubury. Finally, paragraph 163 discloses "machine code" output. Thus, Aubury clearly does not disclose several elements of Applicants' claim 1.

The Final Office Action relies upon the teachings of Bickmore (and Li) to address the absence of disclosure in Aubury of several of Applicants' claim elements. However, for the reasons provided herein below Bickmore is non-analogous art, and thus one skilled in the art would not have looked to the teachings of Bickmore to modify Aubury's system to render Applicants' presently claimed invention.

Bickmore's disclosure is directed to *re-authoring documents* designed for a desktop computer screen for display on a smaller display screen – such as a PDA or iPhone. The technical field of "re-authoring" documents for display on multiple graphical user interface types differs vastly from the field of computer software partitioning in multi-processor systems. The field of re-authoring documents for display on a variety of screen sizes relates to the area of graphical user interface display design for computer software. This area of technical endeavor relates to the external/visual representation of data, such as for example images presented on display screens.

The field of endeavor to which Aubury (and Applicants' invention) applies is characterized by the *implementation* (without alteration) of a system's behavioral description/specification in the form of particular software and hardware. In contrast Bickmore teaches *modifying* a previously existing fully specified display interface, to adapt the previously defined external visual aspect of a computer program to accommodate a differing set of physical dimensions of another display. The aims/design restrictions of Aubury and Bickmore are in conflict and cannot be resolved without disregarding the teachings of at least one of the references (modifying vs. maintaining).

To further illustrate the inapplicability of Bickmore to Aubury, Bickmore discloses partitioning displays into components that are either on a same display or not displayed at all (representing a modification/loss of the original specified functionality). Thus, according to Bickmore, data loss is acceptable. For example, Bickmore states:

> "common techniques include keeping only the first image, or keeping only the first and last images, i.e. the bookend images and deleting the rest." *See*, Bickmore, col. 7, lines 11-13.

"documents with many text blocks can be reduced by replacing each text block with the first sentence or phrase of each block, i.e. first sentence elision." *See, Id.*, col. 7, lines 21-24.

"Semantic elision can be performed on sidebars that present information which is tangential to the main concepts presented in a page. Many of the Xerox pages had such side bars, which were simply eliminated in the reduced versions." *See, Id.*, col. 7, lines 31-34.

"Banners primarily contain a set of images and a small number of navigation links, often only one, that serve to establish an aesthetic look, but contain little or no content. When space is at a premium, these can usually be omitted entirely." *See, Id.* col. 7, lines 41-45.

In contrast to the express teachings of Bickmore, loss of part of a source description is *unacceptable* in a system for designing a combination of hardware and software (Aubury) according to an original functional specification.

Therefore, the inconsistent and unacceptable treatment of information contained in an original specification renders Bickmore's teachings incompatible with the goals and aims of Aubury and the presently claimed invention. Thus, one skilled in the art to which Aubury belongs would not consider Bickmore's teachings applicable to the task of designing partitioned systems based on functional descriptions.

For the reasons set forth herein above, Applicants traverse the obviousness rejection of each of the dependent **claims 2-18** that include all the recited elements of independent claim 1.

Furthermore, Applicants specifically note with regard to **claims 5 and 6** that even if one skilled in the art were to combine the teachings of Aubury, Bickmore and Li, the combination would not render Applicants' recited invention in claims 5 and 6. Aubury does not describe "outlining". Bickmore, while mentioning outlining, does so merely in the context of elision of certain image content. In contrast to claims 5 and 6, Bickmore does not disclose or suggest that the elided content is "replaced by a function call" to a function present as an abstract syntax tree in another set of abstract syntax trees.

Conclusion

Applicants respectfully submit that the patent application is in condition for allowance. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,

Mark Joy, Reg. No. 35,562
LEYDIG, VOIT & MAYER, LTD.
Two Prudential Plaza, Suite 4900
180 North Stetson Avenue
Chicago, Illinois 60601-6731
(312) 616-5600 (telephone)
(312) 616-5700 (facsimile)

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